Rupture of a Duodenal Ulcer During Cortical Extract Therapy for Serum Sickness

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SUTURING OF A LACERATION on the right middle finger of a 38-year-old woman was carried out June 20, 1960, and after a negative reaction to a skin test for sensitivity, 3,000 units of tetanus antitoxin was given intramuscularly.

On July 1 severe hives, pain in the joints and moderate edema of the feet developed. ACTH gel, 80 units, was given intramuscularly. When symptoms persisted the following day, 40 units of ACTH gel, 0.3 cc. of epinephrine (1:10,000 dilution) and 10.0 mg. of diphenhydramine (Benedryl®) were administered intramuscularly and 2 capsules of Aristomin®* four times a day were given by mouth.

On July 5 the patient showed improvement and the pedal edema was less. Aristomin® was discontinued and instead 4 mg. of Medrol®† four times a day was prescribed. On July 7 the patient was much improved but complained of epigastric burning pain. A bland diet, with milk between meals, was prescribed and the epigastric pain lessened.

The dosage of Medrol® was reduced gradually.

On the evening of July 12 the patient had severe, constant pain in the epigastrium and the right upper quadrant of the abdomen, worse on deep breathing and accompanied by nausea. These symptoms abated but the following morning the pain recurred, this time involving the right side of the abdomen, with nausea and vomiting. The patient was then admitted to Hillcrest Hospital, Petaluma.

The patient had had right inguinal herniorrhaphy in 1952 and bilateral tubal ligation with appendectomy and ovarian cystectomy in 1945. There was no previous history of peptic ulcer.

At the time of admittance she seemed to be anxious and in severe pain and she kept a knee drawn up for a position of comfort. The oral temperature was 99.8° F. Respirations were 20 a minute and the pulse rate 80. Blood pressure was 110/50 mm. of mercury.

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*Each capsule contains triamcinolone, 1 mg.; chlorpheniramine maleate, 2 mg.; ascorbic acid, 75 mg.

†6-methyl-delta-1 hydrocortisone.

Board-like abdominal rigidity was noted on palpation, with tenderness on pressure and on rebound. No masses were felt. The liver, spleen and kidneys could not be palpated. On percussion, liver dullness was not altered. Peristaltic sounds were diminished. On rectal and pelvic examination, tenderness was noted in the pouch of Douglas. No masses were felt.

Hemoglobin content was 12.5 gm. per 100 cc. of blood. Packed cell volume was 35 per cent. Leukocytes numbered 37,900 per cu. mm.—polymorphonuclear cells 96 per cent (segmented 93 per cent and nonsegmented 3 per cent); lymphocytes, 3 per cent and monocytes 1 per cent. The results of urinalysis were within normal limits.

A plain film of the abdomen showed a small crescent of free air under the right dome of the diaphragm, with localized ileus in the upper small bowel.

A diagnosis of perforated hollow viscus, possibly duodenal ulcer, was made. The patient was prepared for immediate operation and preparations were made for nasogastric suction and intravenous administration of fluids. Hydrocortisone, 200 mg., and atropine, 0.4 mg., were given intramuscularly.

A right paramedian incision was made in the abdomen. A copious amount of yellowish turbid fluid was present. The gallbladder and hepatic flexure were adherent to the first part of the duodenum, which felt indurated and contained a leaking opening 2 mm. in diameter. Peritoneal lavage was carried out and the duodenal perforation was repaired. The patient did well after the operation. For six days postoperatively hydrocortisone was given in gradually decreasing doses. The patient was discharged in good condition July 20, 1960, with prescription of an "ulcer diet."

COMMENT

Danish and Landman[1] reported a case of perforation due to triamcinolone, stating that it was the first in the literature. The present case differs from the one they reported, in that here there was a very short period of therapy with cortical extract and the dose was smaller—factors which probably kept the symptoms of perforation from being masked. The total dose of ACTH given in the present case was 120 units in two days, the total dose of triamcino-

lone 20 mg. in five days, and the total dose of Medrol® 82 mg. in eight days. The patient in the case reported by Danish and Landman was in hospital 23 days and during that time received 364 mg. of triamcinolone and 220 units of ACTH.

ADDENDUM

On April 11, 1961, this patient was again seen because of epigastric burning of three weeks' duration. An upper gastrointestinal series revealed a deformity of the duodenal bulb with a small active superficial ulceration. A bland diet and prescription of anti-acid preparations and sedation resulted in a complete disappearance of ulcer symptoms.

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REFERENCE

1. Danish, A. W., and Landman, M. P.: Ruptured peptic ulcer during triamcinolone therapy; report of a case, J.A.M.A., 173:900, June 25, 1960.

Anaphylactic Reactions to Chymotrypsin

A Report of Two Cases

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THE USE OF proteolytic enzymes has been advocated as an adjunct in the treatment of many diseases. Aqueous chymotrypsin (Chymar® aqueous) is one of the more commonly used preparations. According to the manufacturer, it is useful in local inflammation, edema and pain, blood and lymph effusions in accidental injuries, phlebitis, thrombophlebitis, cellulitis, hernia repair, tonsillectomy, hemorrhoidectomy, plastic operations and other surgical procedures; respiratory tract conditions, obstetrical and gynecological disorders including pelvic inflammatory disease, postpartum breast engorgement, episiotomy; ocular conditions, chronic ulcers, stasis varicose, diabetic types.

Recently anaphylactic reactions to chymotrypsin injections have been reported.[1,2,3] We recently observed rather severe reaction to injected aqueous chymotrypsin in two cases.

REPORTS OF CASES

CASE 1. A 64-year-old white man had extensive operation for radical removal of a squamous cell carcinoma of the right tonsil on March 1, 1960. Postoperatively he received Chymar,® 1 cc. intramuscularly every 8 hours for four days, without untoward results.

On July 26, 1960, the patient had a resection of the right carotid artery for an aneurysm. A Dacron® tube was placed between the common carotid artery and internal carotid artery, and again the patient received Chymar,® 1 cc. intramuscularly every 12 hours for six days, with no untoward results. On November 2, 1960, the graft having failed, the Dacron® tube was removed. Chymar® was again administered. The first dose of 1 cc. was given intramuscularly at 9:30 a.m. By 9:45 a.m. the patient had become cyanotic, sweaty, dyspneic and extremely apprehensive. The pulse rate was 140 per minute. Moist rales were heard throughout both lung fields. A reaction to Chymar® was suspected, and 0.2 cc. of 1:1000 epinephrine hydrochloride was given hypodermically, 50 mg. of hydrocortisone sodium succinate (Solu-Cortef®) was given intravenously and 200 mg. of hydrocortisone sodium succinate was placed in 500 cc. of 5 per cent dextrose in water and this was infused by intravenous drip. The symptoms subsided completely. The dosage of hydrocortisone sodium succinate was then gradually decreased over the next five days.

This patient had no previous history of allergic sensitivity to anything.

CASE 2. The patient, a 40-year-old Negro man, had no history of previous allergic disease or of having received Chymar® injections. High ligation and stripping of the right greater saphenous venous system was carried out October 7, 1960. Chymar,® 1 cc. intramuscularly twice a day, was prescribed and on the following day at 9:15 a.m. 1 cc. was given intramuscularly. Almost immediately dyspnea, wheezing and a diffuse itching urticaria developed. The pulse rate was 140 per minute. The patient was in obvious distress. Epinephrine hydrochloride, 0.5 cc. in 1:1000 solution, was given hypodermically and 100 mg. of hydrocortisone sodium succinate in 500 cc. of 5 per cent dextrose in water was given as a slow intravenous drip. The symptoms of hypersensitivity reaction abated and the dosage of hydrocortisone sodium succinate was gradually reduced over the succeeding five days.

SUMMARY

Two patients under quite different circumstances had rather severe reactions to intramuscular administration of aqueous chymotrypsin. The first patient had had several previous injections before a reaction developed. The second patient had no history of previous injections of chymotrypsin. Therapy with epinephrine and hydrocortisone sodium succinate abated the symptoms in both instances.

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REFERENCES

1. Liebowitz, D., and Ritter, H.: Anaphylactic reaction to chymotrypsin, J.A.M.A., 172:159-160, Jan. 9, 1960.

2. MacLaren, W. R., and Aladjem, F.: Allergy to chymotrypsin, J. Allergy, 28:89-90, Jan. 1957.

3. Rose, K. D.: Anaphylactic reaction to aqueous chymotrypsin injection, J.A.M.A., 173:196-197, June 18, 1960.

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